

To: Members of the State Board of Education
Fr: Peter W. Morrill, General Manager
Dt: 5/24/99
Re: Mandated Digital Television Conversion Overview

The purpose of this memo is to provide you with background material regarding Idaho Public Television's federally mandated conversion to digital television (DTV).

At the June 1999 State Board of Education meeting in Moscow, I will be making a presentation directed towards the fiscal year 2001 budget request. This request includes the project funds necessary to accomplish the first year of a projected three year conversion process to bring on-line digital transmitters most likely co-located with our current analog transmitters in Boise, Moscow, Pocatello, Coeur d'Alene, and Twin Falls.

The total three year conversion cost to comply with the federal mandate will range from approximately \$11 to \$13 million, with approximately \$4.8 million in the fiscal year 2001 capital budget and the remainder in the fiscal year 2002 and 2003 budgets. In addition, there will be increased operating expenses (for items such as increased electricity for transmission, television programming, new format tapes, training, etc.) and personnel required throughout the transition period.

I would like to make several points about the DTV conversion for your consideration. I'll start with the potential opportunities that DTV conversion offers, discuss the progress we've already made in preparing for this conversion, and then review specific pressures forcing state financial support of the DTV conversion.

DTV will offer many new partnership opportunities for public television stations and their state and local governments and education communities to improve current services and develop others to benefit the state and our people.

While the potential of high quality High Definition Television (HDTV) is impressive, the potential for broadcasting multiple channels of video audio and data simultaneously is equally exciting. Already, many public television stations have developed plans for a range of new services including job training, “C-SPAN-type” coverage of the local and state government, a K-12 education channel, a 24 hour children’s channel and a life long learning channel.

IdahoPTV is the only statewide mass medium in the state, providing Idaho public affairs information and education resources to a population that is separated by rough terrain, big distances, and poor north-south roads. IdahoPTV provides a service that merges national and local content, with a strong outreach effort to make national programming relevant in local communities. Our own Idaho-oriented productions are immensely popular with the television audience.

IdahoPTV is an important source of information for citizens, with ten debates produced for this last general election that reach a statewide audience, and stimulate other media comment and coverage of the election. The governor’s January addresses are covered and carried by IdahoPTV, and both audio- and video-streamed from our web-site, as well. In addition, IdahoPTV streamed from our web-site live audio of the Idaho House and Senate. The weekly television program providing Idaho legislative coverage is broadcast and streamed, as well.

DTV services have the potential to provide both video and data services for young children (Idaho children have one of the lowest rates of attendance in daycare or pre-school in the nation); K-12 educational resources at a low cost to isolated schools (Idaho state spending per pupil ranks 48th in the nation); distance learning resources for place-bound students; and low-cost data services to rural populations.

Among the DTV services envisioned as available with a statewide two-way datacast capability are:

- Training and learning opportunities that include text, video, audio, and two-way interaction with other learners and teachers,
- More widely accessible job, library, and health services and information,
- Increased citizen access to government,
- More efficient training and communication within state government.

At the most basic level, without IdahoPTV, there is no PBS broadcast available to the vast majority of Idahoans. Without DTV, the continued existence of IdahoPTV is questionable.

Idaho Public Television has made significant steps towards DTV conversion.

- In October 1998, IdahoPTV was the recipient of a major federal grant (with local matching funds provided by the 1999 Legislature) to connect Moscow to Boise with a digital connection system capable of passing digital television.
- In addition, in collaboration with the Idaho Department of Administration and several public safety entities, a similar system was proposed and funded by the state to connect Pocatello to Boise. These two projects have set the stage for Idaho Public Television to be able to distribute to all three regions the digital television signals...but this does NOT provide for the digital television transmitters, site improvements (e.g. tower reinforcements or higher capacity electrical power feeds and entrances), and control equipment required to transmit the signals as mandated by the FCC.
- The 1999 Legislative Session saw the approval of a funding request by Idaho Public Television for two digital television planning and engineering positions to begin the highly detailed and complicated project of conversion.
- Idaho Public Television has been selected by America's Public Television Stations (APTS) as one of five sites to develop a digital television model business plan, which is being funded by the Ford Foundation.

Idaho Public Television's conversion request is lower than the national average.

The estimated total conversion cost for public television nationwide is \$1.7 billion. The estimated total cost of a transition to digital can vary widely from station to station. All stations have to buy digital

transmitters, antennas and new studio equipment, but some will have to build new towers and new buildings. *IdahoPTV has decided to put its priority on complying with the basic federal transmission mandate.* IPTV is not seeking at this time any funds to replace studio or production equipment. Idaho Public Television's network of 34 translators serving many of our smaller rural communities will also be required to convert...however, not at this time. The FCC has not yet issued the technical and timeline rules on digital translators.

As you can see in the chart below, IdahoPTV's request for an estimated \$11 million to cover the basic conversion cost of 5 transmitters averages out to \$2.2 million per transmitter, slightly lower than the national average. This is, in part, because the two digital microwave systems providing a North-South (Boise to Moscow) and East-West (Boise to Pocatello) "backbone" for the IPTV network have already been mostly funded through other federal and state funds.

State Funding Proposals		
<u>State Total Proposal</u>	<u>Funding per Transmitter</u>	<u># of Transmitters</u>
National Average: \$19.23 million	\$2.63 million	8
Idaho: @\$11 million	@\$2.2 million	5

It will be good public policy to support the conversion to digital.

As many states are realizing, digital support is not merely an appropriation, it is an investment in the future of the state.

If Idaho does not take advantage of the digital channels the FCC has assigned to Idaho Public Television for Pocatello/Idaho Falls, Twin Falls, Boise, Moscow and Coeur d'Alene by the year 2003, they will be taken back by the federal government and auctioned off as directed by the Balanced Budget Act of 1997. The digital channel assignments can be viewed a little like a water right...once you give it up...it's virtually impossible to get it back.

Also at stake are Idaho Public Television's five analog channel assignments. The FCC has mandated nationally a minimum of a three year period during which broadcasters would operate on both their analog channels and digital channels. The FCC has been mandated by the Balanced Budget Act of 1997, to take back the existing analog channels assigned to all broadcasters no sooner than

2006 regardless of whether or not a station takes advantage of its digital channel assignment(s). In Idaho these assignments are KAID-TV 4/Boise, KISU-TV 10/Pocatello, KUID-TV 12/Moscow, KCDT-TV 26/Coeur d'Alene and KIPT-TV 13/Twin Falls.

Finally, the 34 translators which rebroadcast the five primary transmitters and our channel assignments on more than 80 cable television companies which serve Idaho would be threatened.

Clearly, if Idaho Public Television does not comply with the FCC timeline on DTV conversion, our service to the citizens of Idaho is imperiled.

State support will be essential in obtaining any federal matching funds which may become available to IPTV for its DTV conversion.

Due to the fact that the federal government has not yet decided what role they will play in funding public television's federally mandated conversion to digital television and that the work of converting our statewide network will take three years, Idaho Public Television will be asking for the full basic conversion amount for the first of three years in June of 1999...with the expectation that if federal funds become available, the state portion will be reduced appropriately and accordingly. (See attached "Idaho Public Television Mandated Conversion to Digital Television Preliminary Multi-Year Timeline.") This federal funding may take the form of grants for future construction or to cover "after the fact" construction costs.

Many states have already appropriated, or now are considering appropriating, substantial investments in support of the transition to digital. Currently there are 32 state funding proposals seeking a total of \$616 million for assistance with public television's conversion to digital, and at least three more in the planning stages.

The conversion to digital is an unfunded federal mandate, and the timetable is firm.

The mandated conversion from analog to digital for all broadcasters was a three-step process initiated by the Telecommunications Act of 1996, continued by the Balanced Budget Act of 1997 and adopted by the Federal Communications Commission's rules in its digital television proceeding in 1997.

Based on our conversations with Idaho's members of Congress (refer to letter from Idaho's Members of Congress), the Federal Communications Commission and the imperatives of the Balanced Budget Act of 1997 (balanced in part with the sale of spectrum valued at more than \$80 billion following broadcasters' transition to digital technology), there is no indication that the deadline will be delayed.

Nationwide, commercial and public broadcasters have already made substantial investments in the new technology and must operate both their current and new digital channels for the conversion period. The inability of public television to collaborate now with commercial broadcasters on tower construction and other facilities will only increase the public's costs. The projected costs and budget request reflect those anticipated collaborations. In our state, Idaho Public Television has already begun discussions with commercial broadcasters around the state for common-sense and cost-effective partnerships to reduce the conversion costs for the state-owned network.

I hope this helps to answer your questions about the necessity of state support for Idaho Public Television's conversion to digital. Again, I feel that the conversion to DTV offers significant potential educational opportunities for Idahoans; that supporting IPTV's DTV conversion is both a good business decision, and politically responsible. It preserves a valuable state-controlled communication resource for the people of Idaho while providing possibilities to serve rural schools, students at home, and citizens with information services that will not be provided by the marketplace. I look forward to discussing our budget request with you.

Digital Television Overview Material:

The Federal Mandate to Convert to Digital

The mandated conversion from analog to digital for all broadcasters was a three-step process initiated by the Telecommunications Act of 1996, continued by the Balanced Budget Act of 1997 and adopted by the Federal Communications Commission's rules in its digital television proceeding in 1997.

The Telecommunications Act of 1996

In the 1996 Telecommunications Act, Congress assigned to broadcasters DTV spectrum and mandated that the FCC recover all analog spectrum from broadcasters. The Act did not address how or when the give back would take place, leaving the details of spectrum recovery and the transition timeline to the FCC.

Section 201 of the Telecommunications Act provides comprehensive guidelines for the FCC to follow in granting licenses for spectrum to be used in offering digital television services.

The Act provides that if the FCC decides to issue licenses for advanced television services, then such licenses must go to existing broadcasters. The assignment of DTV spectrum to broadcasters, authorized by section 201(a) of the Act, is in addition to spectrum broadcasters currently use to provide analog service. Section 201(c) requires the FCC to recover from a broadcaster that is granted an additional license for DTV spectrum one of its licenses for reallocation or reassignment. The Act does not address when that "give back" would take place. Subsection (e) requires the FCC to establish a program to assess and collect annual fees from DTV licensees that offer supplementary services for which they receive a subscription fee or compensation, either directly or indirectly, from a third party for transmitting that party's material. The fee is designed to approximate the value of the spectrum that an entity offering a competing subscription service would have paid.

The Balanced Budget Act of 1997

In the Balanced Budget Act of 1997, Congress set a deadline of December 31, 2006 for the return of analog spectrum to the federal government for auction. Congress has added the caveat that the analog service will not be discontinued until at least 85 percent of homes in a market are capable of receiving a DTV signal.

The Balanced Budget Act of 1997 amended Section 309(j) of the Communications Act of 1934 (47 U.S.C. 309(j)) by adding at the end the following new paragraph:

14) Auction of recaptured broadcast television spectrum.--

(A) Limitations on terms of terrestrial television broadcast licenses.--

A television broadcast license that authorizes analog television service may not be renewed to authorize such service for a period that extends beyond December 31, 2006.

The FCC's Digital Television Proceeding

In the final orders of its digital television proceeding, the FCC assigned each existing broadcaster a 6 MHz digital channel and set forth the transition timeline. The FCC set no earlier than May 1, 2006 as its final deadline for the return of analog spectrum. In addition, the FCC gave noncommercial stations until May 2003 to complete construction and begin broadcasting a digital signal, an extra year after the commercial broadcasters' deadline. Stations that do not begin broadcasting a digital signal by the deadline will lose their protected status. While they can still file an application for a DTV channel, they will face the risk of a competing application and a comparative hearing.

FCC Digital Conversion Timeline

December 1996: The FCC established digital television (DTV) transmission standards by adopting the Advanced Television Systems Committee (ATSC) digital television standard.

April 1997: The FCC established a mandated timeline for television stations nationwide to convert to digital television.

November 1998: Voluntary DTV transmission began at over 30 stations in the top 10 markets, including seven noncommercial stations.

May 1999: All commercial stations in the top 10 markets must begin to transmit DTV.

November 1999: Commercial television stations in the top 30 markets, representing approximately 50 percent of all TV households, must begin transmitting in DTV.

April 30, 2000: Public television stations, including Idaho Public Television, must certify to the Corporation for Public Broadcasting (CPB) that they “intend to provide a digital broadcast service.” If IdahoPTV opts not to certify, CPB will begin a process of de-qualification for IdahoPTV’s current Community Service Grant (more than \$805,000 per year).

November 1, 2000: Non-commercial stations, including IdahoPTV, must apply for permits from the FCC to begin construction for digital television facilities. If our applications are not submitted, the assigned digital channels for our markets will be revoked and auctioned off.

May 2002: All other commercial TV stations must convert to DTV.

April 2003: Stations must simulcast at least 50 percent of their current analog programming on their DTV channel.

May 2003: All public television stations, including IdahoPTV, must have facilities in place to transmit on their assigned digital television channels.

April 2004: Stations must simulcast at least 75 percent of their analog program schedule on their DTV channel.

April 2005: All stations must simulcast at least 100 percent of their analog program schedule on their DTV channel, a requirement that will continue until the analog channel is terminated and is returned to the FCC.

2006: The earliest date stations must turn off their analog signal.

State Funding Proposals For Digital Conversion

(April 30, 1999)

In Pennsylvania, the state has voted to fund the \$16.6 million initial request by the eight Pennsylvania stations and the Pennsylvania Public Television Network.

The Connecticut state legislature voted last year to fund \$10 million.

Kentucky Educational Television estimates its conversion costs to be \$68 million for its 14 transmitters. Last year KET received \$6 million for DTV and is anticipating major legislative support for bond issues to fund the entire cost.

The Nebraska Network requested and has been granted \$59 million in state funding via a bond issue, or 100 percent of the total cost of the full transition and the cost to replace a satellite transponder.

Indiana's eight public television stations are seeking \$32 million.

In Florida, the 13 public television stations estimate a cost of \$101 million to totally transition to a digital format. To meet the FCC deadline, the stations are currently working with the Public Broadcasting Office at the Florida Department of Education to secure an initial \$20 million from the State.

North Carolina Public Television is seeking \$56.5 million over two years in state funding for the entirety of the estimated cost to convert its 11 transmitters and statewide interconnection system.

South Carolina Educational Television is seeking \$30.5 million in state funding for the conversion of its 11 transmitters. The South Carolina Legislature just approved the funding of the first of three year conversion costs totaling \$10 million.

The Wisconsin stations are seeking a total of \$30-\$40 million, or two-thirds of the total conversion cost of \$50-60 million for its 8 transmitters.

Last year Maine Public Broadcasting received \$2 million in state funding dollars for DTV conversion and this year it received the Governor's recommendation for a \$9.4 million DTV bond.

NOTE: Additional materials available from the Office of the State Board of Education. Please contact: vbarker@osbe.state.id.us or 208-334-2270 for a copy.